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ABSTRACT

This report describes specific reform practices schools are implementing to realize the vision set forth in the National Association of Secondary School Principals document, "Breaking Ranks," which calls for changes in curriculum, instruction, assessment, school organization, professional development, community partnerships, and leadership in U.S. high schools. The first section reviews a general critique of public high schools articulated in the 1980s and describes the reform practices that have emerged over the past decade in response to that critique. The second section offers examples of schools that have pulled together a number of those reforms into a comprehensive school restructuring effort, focusing on one school in depth. The third section identifies challenges schools can expect to encounter when implementing the set of reforms, drawing on the experiences of several schools with which researchers from the Center for the Education of Children Placed at Risk have worked since 1994 as part of the Talent Development High Schools project. (Contains 1 table and 79 references.) (Author/SLD)

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SMALL LEARNING COMMUNITIES MEET SCHOOL-TO-WORK

Whole-School Restructuring for Urban Comprehensive High Schools

Nettie E. Legters

Report No. 31 / January 1999

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CENTER FOR RESEARCH ON THE EDUCATION OF STUDENTS PLACED AT RISK

Johns Hopkins University & Howard University

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The Center

Every child has the capacity to succeed in school and in life. Yet far too many children, especially those from poor and minority families, are placed at risk by school practices that are based on a sorting paradigm in which some students receive high-expectations instruction while the rest are relegated to lower quality education and lower quality futures. The sorting perspective must be replaced by a "talent development" model that asserts that all children are capable of succeeding in a rich and demanding curriculum with appropriate assistance and support.

The mission of the Center for Research on the Education of Students Placed At Risk (CRESPAR) is to conduct the research, development, evaluation, and dissemination needed to transform schooling for students placed at risk. The work of the Center is guided by three central themes — ensuring the success of all students at key development points, building on students' personal and cultural assets, and scaling up effective programs — and conducted through seven research and development programs and a program of institutional activities.

CRESPAR is organized as a partnership of Johns Hopkins University and Howard University, in collaboration with researchers at the University of California at Santa Barbara, University of California at Los Angeles, University of Chicago, Manpower Demonstration Research Corporation, University of Memphis, Haskell Indian Nations University, and University of Houston-Clear Lake.

CRESPAR is supported by the National Institute on the Education of At-Risk Students (At-Risk Institute), one of five institutes created by the Educational Research, Development, Dissemination and Improvement Act of 1994 and located within the Office of Educational Research and Improvement (OERI) at the U.S. Department of Education. The At-Risk Institute supports a range of research and development activities designed to improve the education of students at risk of educational failure because of limited English proficiency, poverty, race, geographic location, or economic disadvantage.

Abstract

This report describes specific reform practices schools are implementing to realize the vision set forth in NASSP's *Breaking Ranks*, which calls for changes in curriculum, instruction, assessment, school organization, professional development, community partnerships, and leadership in American high schools. The first section reviews a general critique of public high schools articulated in the 1980s and describes the reforms practices that have emerged over the past decade in response to that critique. The second section offers examples of schools that have pulled together a number of those reforms into a comprehensive school restructuring effort, focusing on one school in depth. The third section identifies challenges schools can expect to encounter when implementing the set of reforms, drawing on the experience of several schools the author and a research team at CRESPAR have worked with since 1994 as part of the Talent Development High Schools project.

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Introduction

The opening scene of the 1989 film *Lean on Me* is designed to shock. It portrays a gritty urban high school filled with thugs, drugs, and overt violence. The fast moving clip ends with the hospitalization of a teacher who tried to break up a student fight as the graffiti-filled hallways echo with a student crying "somebody help!"

If you ask real urban high school students what they think of that scene (which a colleague and I did in recent focus group interviews), most will say that it is Hollywood hype.[1] Some even allude to racist and classist overtones that permeate media representations of inner-city schools, promoting fear and reinforcing stereotypes of urban pathology and "otherness." Indeed, many of the complaints that these students expressed about their school—boring classes, lack of caring adults, too few engaging activities—are very common criticisms of most large comprehensive high schools, urban and non-urban alike (Sizer, 1984).

Our students go on to say, however, that many of the problems highlighted in the film do exist in their school, albeit in less exaggerated form. They speak of neighborhood gang rivalries that make the school and surrounding area feel unsafe, of students "hustling" for money, of becoming teen parents and engaging in other activities that distract them from getting an education, and of their sense that students often seem more in control of the school than the adults who are running it. They share a collective sense that they are not receiving as good an education as students who attend selective magnet schools or suburban schools. Their stories are told with sparks of anger and resentment tempered by an underlying resignation that recalls their school's motto—"*Hope and Endure*."

These students' experiences reveal the dual challenge of urban high school reform. Like most large, comprehensive high schools, urban high schools face the blight of anachronism brought on by a rapidly changing world. Structured to provide a college-bound education for only a few students, high schools have been widely criticized for leaving too many students woefully unprepared for increasingly technological workplaces that are demanding not only a high school diploma, but high level skills and post-secondary training as well. At the same time, urban high schools face the additional challenge of economic and demographic changes that have brought an unprecedented concentration of poor and linguistically and ethnically diverse students to their doors—students who have always had more difficulty succeeding in traditional high schools. Although large city school leaders

[1] Focus group interviews were conducted by the author and Professor Lory J. Dance, Department of Sociology, University of Maryland-College Park.

report improving trends (Council of the Great City Schools, 1998), data from urban districts show that students continue to fail and drop out of urban high schools at much higher rates than in non-urban areas (*Education Week*, 1998).

Buffeted by change and under pressure to reform, urban comprehensive high schools have engaged in a growing amount of experimentation with new approaches over the past decade. One strand of experimentation encourages schools to adopt strategies from the middle school movement (MacIver & Epstein, 1991) and from restructuring efforts in industry and government to replace large, highly standardized and bureaucratic organizational structures with smaller, more responsive and flexible learning communities (Lee, Bryk, & Smith, 1993). Another strand promotes curriculum and instructional practices developed through an emerging national school-to-career movement that emphasizes work as an important context for learning at the secondary level (Olson, 1997). In an increasing number of schools, these two strands are being merged to create small career academies, magnet programs, and other forms of focused small learning communities or schools-within-a-school (Stern, Raby, & Dayton, 1992; Fine, 1994). Unfortunately, much of the experimentation in urban high schools has touched very few students to date. Programs often are piecemeal or selective and have come under fire for exacerbating educational inequity in urban districts by "creaming off" the most academically motivated students and most talented teachers (Jeter, 1998).

In spite of these drawbacks, experimentation in urban high schools has played a crucial role in laying the groundwork for more ambitious ventures. Spurred on by new state standards and reconstitution orders, more failing high schools are beginning to explore whole-school restructuring with an eye on providing all students with opportunities to learn relevant, high level curriculum in a safe climate of caring and support. These efforts have both stimulated and been supported by a renewed national focus on restructuring high schools as evidenced by the recent report, *Breaking Ranks*. This report calls for changes in curriculum, instruction, assessment, school organization, professional development, community partnerships, and leadership in American high schools (National Association of Secondary School Principals, 1996). *Breaking Ranks* promotes a vision of high schools that are broken down into smaller units, that emphasize a common curriculum and interdisciplinary instruction, that embrace diversity as a strength, that integrate technology into all aspects of learning, and that provide teachers and administrators with the time, resources, and support they need to continuously improve their school.

The purpose of this report is to describe specific reform practices that schools are implementing to realize the vision set forth in *Breaking Ranks*. Further, this report shows how

some high schools are pulling together a number of these specific reform practices to form a school-wide approach to improvement. The first section reviews a general critique of public high schools articulated in the 1980s and describes the reform practices that have emerged over the past decade in response to that critique. The second section offers examples of schools that have pulled together a number of those reforms into a comprehensive school restructuring effort, focusing on one school in depth. The third section identifies challenges schools can expect to encounter when implementing the set of reforms, drawing on the experience of several schools the author and a research team at CRESPAR have worked with since 1994 as part of the Talent Development High Schools project.[2]

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[2] This research was supported by the U.S. Department of Education, Office of Educational Research and Improvement (OERI). The opinions expressed are the authors' and do not necessarily represent OERI positions or policies.

"...I turned around and looked just in time to see the fellas hopping around the corner, heading out of the building. They left and never came back. They dropped out of school, just like that. I understood why it was so easy for them to quit. There was little in the classes we took that seemed even remotely relevant to our world. I couldn't figure out how learning all that stuff would translate into helping us form a better life."

— Nathan McCall, *Makes Me Wanna Holler*

I. Comprehensive High Schools: Problems and Solutions

Common Critique and the Urban Challenge

A series of studies and national reports released in the 1980s identified many shortcomings to the organization, curriculum, and instructional practices found in traditional comprehensive public high schools (Boyer, 1983; Sizer, 1984; Goodlad, 1984; Oakes, 1985; Powell, Farrer, & Cohen, 1985; Carnegie Forum, 1986). In general, researchers found what practitioners had known for many years—that many students (as well as teachers and administrators) felt apathetic and alienated from school, that the curriculum was fragmented, superficial, and increasingly disconnected from the changing world beyond school, and that high schools offered students highly differentiated and unequal learning opportunities. One study compared high schools with shopping malls that offer quality service and products only to those students with the resources to demand them while allowing the majority of students to get through an unfocused, watered-down curriculum with very little effort (Powell, Farrar, & Cohen, 1985). Even well-funded, elite public high schools have been found to offer vastly unequal learning opportunities to different groups of students (Matthews, 1998).

General criticisms of comprehensive public high schools are magnified in urban districts contending with the educational consequences of middle-class flight, social and financial disinvestment, and a recent wave of immigration. Louis and Miles (1990) aptly extend the shopping mall analogy to urban districts by comparing urban high schools to inner-city mini-marts. "Run-down and overpriced, they often present a limited selection of shoddy goods for their customers...the customer is often poor and usually has neither the resources to go elsewhere in search of better merchandise, nor the assertiveness to demand improved service" (p. 3).

The particular challenges urban high schools face are many. National data show stark achievement gaps among pre-high school students in math, science, and reading, with far more urban students scoring below "basic" than their non-urban counterparts (*Education Week*, 1998). This means that most students are entering urban high schools with extremely poor

prior preparation. A high concentration of poverty among students and in surrounding neighborhoods also means that issues of health, safety, and early transitions into adult roles loom larger in the daily operation of urban high schools.[3] In addition, urban high schools face higher levels of academic, linguistic, and cultural diversity than non-urban high schools. This diversity results in larger numbers of students who require special or individualized services, and places demands on teachers to teach highly heterogeneous groups. The typical neighborhood high school in Baltimore, for example, must provide special education services to 20% of its students, compared with 12% statewide and less than one percent in the city's magnet high schools (Baltimore City Public School System, 1997). Finally, many urban city school systems are very large and mired down in bureaucratic inertia, complicated politics, and short-lived leadership, leaving high schools both unsupported and subject to constantly shifting priorities (Louis & Miles, 1990; *Education Week*, 1998).

Given these challenges, it is not surprising that urban high schools fare worse than their non-urban counterparts on most measures, including achievement and dropout and graduation rates. Only from one-third to less than one-half of students in urban districts score at the basic level or higher in reading, mathematics, and science, compared with over two-thirds of students in non-urban districts. High schools in urban districts on average lose over half of their students between freshman and senior year, compared to a nationwide average of less than a third. At just under 10%, the single-year dropout rate for urban districts is nearly twice the national average; some urban districts struggle with single-year dropout rates as high as 20% (*Education Week*, 1998). These numbers spell disaster for young adults who typically need post-high school education credentials to find living wage employment in an economy where low-skill jobs are becoming increasingly scarce (Singh, in Kretovics & Nussel, 1994).

Research has traced the malaise of high schooling—general apathy, fragmented curriculum, and unequal learning opportunities that lead to poor achievement and high dropout rates—to several specific features of high schools which are especially problematic in urban contexts. These features include large size, rigid curricular tracking, departmentalization, disjointed curriculum that lacks relevance, lockstep scheduling, and unsupported transitions. Fortunately, reforms have been developed and are being tested in each area. The remainder of this section discusses these features and outlines the reform responses. These features and corresponding reforms are summarized in Table 1.

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[3] Poverty rates nearly doubled in many large cities since the early 1980s, making urban students more than twice as likely to attend high-poverty schools (schools in which more than half the students qualify for free or reduced-price lunch) than their non-urban counterparts. Not only poor, but minority students are over-represented in urban schools; while urban school districts enroll only one-quarter of public school children in the U.S., over one-third of the nation's poor students and nearly half its minority students attend school in urban areas (*Education Week*, 1998).

Table 1

Criticisms of Comprehensive High Schools and Reform Responses

Criticisms	Reform Responses
Large Size	• Small schools • Schools-within-a-school (houses, clusters, small learning communities)
Curriculum Tracking and Unequal Learning Opportunities	• Common core curriculum
Departmentalization	• Interdisciplinary teaming
Lack of Relevance	• School-to-work focus • Career Academies • Multicultural curriculum
Rigid Schedule	• Flexible block scheduling • Longer class periods • Extra Help opportunities (Flex School, Saturday School, Summer School)
Teacher Centered Instruction	• Active instructional techniques (cooperative learning, project-based learning, integrating technology)
Unaided Transition to High School	• Orientation and summer transition programs • Advisories and special classes for freshman • Ninth grade academies • Alternative and after school settings

Specific Problems and Corresponding Solutions

Size

The large size of most public high schools was once viewed as an advantage because a large, comprehensive high school had more resources, could offer more varied courses, and served as a focal point of pride and social activity in a community (Conant, 1959). More recently, however, a growing body of evidence points out the deleterious effects of large schools on a host of student outcomes, including achievement, attendance, involvement in

school activities, and dropout rates (Fowler, 1992; Lee & Smith, 1995, 1997; Oxley, 1994). These effects are typically attributed to the difficulty that students and adults have in getting to know one another well in large schools. Impersonal relationships breed a sense of anonymity, making it easier for students to act out and more difficult for adults to curb adolescent tendencies to defy adult directives. Providing services and enforcing rules in a fair and consistent manner to hundreds of students each day overwhelms the patience and talents of even the most committed teachers, administrators, and counselors. Students who feel that no one cares about them or their performance in school are more likely to act out or become disengaged and drop out of school (Klonsky, 1995).

Problems attributed to large size affect urban students more than their suburban and rural counterparts, because nearly all urban high school students attend large high schools.[1] Personalized relationships are likely to be even more important in schools serving large numbers of poor and minority students, because a greater proportion of students require more adult attention and special services. Moreover, as young adolescents who are developing an awareness of their own social identities, poor and minority students need personal attachments to persist in what they may view as a white, middle class establishment to which they feel they do not belong (Fordham & Ogbu, 1986).

Research on school size has spawned a widespread movement toward smaller schools and the creation of self-contained "houses," "charters," or small learning communities (SLCs) within large high schools. Inspired by the widely publicized success of Central Park East in New York City and strongly influenced by Sizer's Coalition for Essential Schools, SLCs have spread to high schools in Boston, Rochester, Columbus, Philadelphia, Chicago, Baltimore, parts of California, and other areas. In general, SLCs have been found to have positive effects on students' relationships with peers, teachers, and staff, extracurricular participation, and a sense of community and teamwork among staff. Students participating in SLCs also have been found to have better attendance, higher course passage rates, and fewer suspensions compared to demographically similar students in more traditional high school settings. These same studies show, however, that local politics, lack of leadership, and scarce resources make it difficult for districts to achieve strong implementation of SLCs on a district-wide scale. These studies further show that weak implementation limits positive outcomes for students and staff (Oxley, 1990; Fine, 1994).

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[1] In 1995, 85% of high school students in urban districts attended schools that enrolled 900 or more students, compared with the U.S. average of 68% (*Education Week*, 1998).

Curricular Tracking

High schools traditionally have been organized into separate curricular tracks—college prep, general, and vocational. This structure has been widely criticized for creating unequal learning opportunities for high school students and reinforcing social and economic stratification in society at large (Oakes, 1985). Studies show that most high school students are tracked, that students in the lower track classes are disproportionately minority, and that general track students experience a less demanding, watered-down curriculum and much less stimulating instruction than their high track counterparts (Goodlad, 1984; Braddock, 1990; Oakes & Lipton, 1990).

Tracking is especially problematic in urban schools in which a larger proportion of students perform below grade level and fall below the national average on basic reading, math and science tests; because of this performance most of these students are relegated to a general track in which they have little opportunity to learn higher-order skills or take the courses they need to get into college.[5] High dropout rates and poor attendance are partly attributed to tracking because students in general education courses are often bored, know that they are not college bound, and see little reason to persist in school. A study using national data found that sophomores enrolled in general and vocational tracks are three to four times more likely to drop out than students in academic programs (Barro & Kolstad, 1987). Lee and Eckstrom (1987) found that students in general and vocational tracks are less likely to have access to a guidance counselor to help with course selection and post-high school planning.

A central feature of restructuring urban high schools is detracking instruction, offering instead a common core curriculum in which all students take the same set of college preparatory courses (Newman & Wehlage, 1995; Lee & Smith, 1995). A core curriculum typically consists of four years of English and three or more years each of mathematics, social studies, and science. The strongest arguments in favor of a common core curriculum in urban schools are found in research on Catholic and private schools. These studies show that students not only achieve more in schools that expect all students to succeed in the same set of core academic courses, but that achievement is distributed more equitably across socio-economic class within those schools as well (Coleman, Hoffer, & Kilgore, 1982; Bryk, Lee, & Holland, 1993). Other studies that examine learning opportunities and course taking in public high schools support these findings (Council of the Great City Schools, 1998; Lee, Smith, & Croninger, 1997; for review, see McPartland & Schneider, 1996). A recent study of

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[5] Six out of every ten urban students fail to perform at basic levels in reading, math, and science, compared to only one-third of non-urban students. In some states, ninety percent of urban students fail to pass basic 8th grade math and science tests. (*Education Week*, 1998)

detracking initiatives suggests, however, that the forces of academic differentiation run deep in high schools. Powerful parents and conflicts with the stratified nature of higher education systems can pose substantial barriers to detracking efforts (Wells & Oakes, 1996).

Departmentalization

A universal feature of traditional secondary schooling is organization into subject-area departments. Specialization in a particular subject area enables secondary teachers to know a subject well and hence teach the higher-level instructional content required for older students. Departmentalization, however, has been criticized for producing a superficial and fragmented curriculum that fails to engage many students. Research evidence also suggests that the instructional benefits of departmentalized staffing may be offset by ways in which departmentalization detracts from a school's ability to provide an environment of caring and support for its students (Bryk, Lee, & Smith, 1990; McPartland, 1990). Departmentalization can interfere with positive teacher-student relations by putting up procedural, psychological, and logistical barriers that prevent teachers and students from knowing one another well. Because secondary teachers' professional identities are more closely bound to the standards of a particular subject area (and often strict curricular guidelines), they may be more likely to fail students who do not meet the course requirements without feeling a personal need to help students overcome their difficulties. High school teachers typically teach five or six different classes per day and have little or no interaction with teachers in other subjects who teach those same students, making it very difficult for them to know any individual student and his/her capabilities well (LaPoint, Jordan, McPartland, & Penn Towns, 1996).

To preserve the benefits of subject-area specialization but eliminate its isolating and potentially alienating aspects, restructuring high schools are experimenting with interdisciplinary teacher teaming (Stinson, 1994; Newman & Wehlage, 1995; Lee & Smith, 1995). Better known as a middle school practice, the most prevalent form of interdisciplinary teaming is a four-teacher team made up of a math, an English, a science, and a social studies teacher. These teachers share responsibility for the curriculum, instruction, evaluation, and often the scheduling and discipline of a group of 100-150 students (Mac Iver & Epstein, 1991; Arhar, 1992; Alexander & George, 1981). Like small learning communities, this arrangement helps personalize the learning environment by increasing knowledge and communication among teachers, students, and parents about each students' successes and problems in each subject. This sharing of students may not only provide teachers, parents, and students with a more integrated view of students' progress, but may also help students feel that there is a group of concerned adults looking out for them.

Interdisciplinary teaming also can lend more coherence and depth to the traditional academic curriculum by enabling teachers to integrate lessons across subject areas and focus on thematic units. This aspect of teaming, however, requires curricular flexibility as well as training and time for teachers to plan together. Leaders of one high school teaming experiment suggest that "changing structures and relationships precedes changing curriculum" (Ashby & Ducett, 1995/96).

Relevance of Schoolwork

High dropout rates, poor attendance, and poor performance among students in vocational and general tracks are indicators that many students are disengaged and care little about school. This is attributed, in part, to teacher-centered, textbook-bound, skill and drill instructional techniques that dominate teaching in general track classes, especially in urban comprehensive high schools that serve high poverty students (Haberman, 1996). Apathy among students also has been attributed to a lack of connection between school work and the world beyond school. Because employers do not require transcripts or other evidence of school performance for entry-level jobs, it is unclear to students who do not see themselves as college-bound how doing well in school will make a difference for their futures (Bishop, 1989). Most business leaders believe that high schools do little to prepare students for the teamwork, communication, decision making, and technological and computing skills required in changing workplaces (SCANS, 1991). Poor and minority students, moreover, are even more prone to apathy in a traditional high school curriculum because they are less likely to see their experience or heritage represented in curricular materials and often lack role models and other motivational supports for academic performance.

An emerging school-to-work or school-to-career movement is one of the most prominent reform efforts aimed at making schoolwork more relevant and engaging more students in school. Inspired by European systems and supported by the 1994 School to Work Opportunities Act, many states across the country have developed technology preparation (Tech Prep), shadowing, apprenticeship, internship, and other work-based learning programs for high school-age youth (Olson, 1997; Stern, et al., 1995). High schools also are experimenting with integrating academic and vocational curricula to form focused career majors, clusters, pathways, or academies (Grubb, 1995).

Career academies present a potentially powerful manifestation of school-to-work efforts because they combine the relevance of a career focus with the personalized environment of a self-contained small learning community. Career academies have been found to have positive effects on student performance, dropout prevention, and college attendance (Stern, Raby, & Dayton, 1992). Early evidence from an evaluation of ten career academy

programs indicates that career academy students are more motivated to attend school and view schoolwork as more relevant to their futures, and that job satisfaction and sense of belonging to a strong professional community are higher among academy teachers (Kemple, 1997). Most high schools experimenting with career academies, however, have only one academy that serves a small group of students. Grubb (1995) points to the potential for all students in a high school to participate in a career-focused program, noting the added benefit of having students actually choose their own program hence increasing their attachment to school. Very few high schools are implementing multiple career academies, clusters, or majors, however, and research evidence is scant.

Compared with the school-to-work movement, efforts to make schooling and schoolwork more relevant to students' cultural backgrounds and experiences are less developed, especially at the high school level. Scholars argue that minority students are more likely to excel in educational environments that acknowledge and respect their language, history, and culture (Hale-Benson, 1986; Hale, 1994; Boykin, 1994; Ladson-Billings, 1994). For example, recent studies suggest that African American students are more engaged and learn more in communal and cooperative group settings when compared to their performance in more traditional individual and competitive learning environments (Boykin, 1994). Boykin offers nine dimensions of an "Afro-cultural ethos" that, taken together, offer a rich heuristic framework for rethinking the education of African American students. To date, however, studies of pedagogical approaches that might be more responsive to students' different cultural backgrounds focus primarily on elementary grade students, leaving open the question of what culturally relevant pedagogy might look like for students in a later developmental stage. Multicultural curricula and language experiments (e.g., ESOL, Ebonics) in general have proved controversial and there is a great need for further experimentation and research in this area.

Schedule and Instruction

A broad critique of traditional uses of time for schooling has recently emerged (National Education Commission on Time and Learning, 1994). The rigid "factory" model of students moving from class to class 6-8 times per day is another aspect of high school organization that impedes the development of close relationships between teachers and students. Periods that are 45 to 50 minutes in length also make it difficult for teachers to complete lessons, present material in a variety of ways so that more students understand, or implement innovative approaches such as project-based, technology-based, or cooperative learning strategies. Finally, the traditional high school schedule reinforces content coverage

over depth of understanding and inhibits strategic and flexible grouping of students who need extra help in a particular area.

In an effort to move away from fragmented instruction and impersonal, factory like environments, high schools are experimenting with alternative forms of scheduling (O'Neil, 1995). Foremost among these are the 4x4 and the alternate day block schedule. Each of these models structures the school day around four 90-minute periods. In the 4x4 plan, students take the same four major classes each day and complete the pattern in the next semester. In the alternate day plan, students take half their classes in extended periods one day, and the other half of their classes the next day, with the pattern repeating throughout the school year (Canady & Rettig, 1995). Flexible block scheduling is often used to support small learning communities and interdisciplinary teaming because it allows the team teachers to change the schedule from week to week or even daily, to meet the particular and changing needs of their students.

Research on block scheduling from around the country indicates that the practice is on the rise. In one study, the number of high schools increased from just over 1% (6 schools) to 35% (130 schools) between 1992 and 1995 (North Carolina Department of Public Instruction, 1996). The same study showed that students in block-scheduled schools are more likely to be low-SES, but that they scored significantly higher on standardized subject tests than students in non-blocked schools after adjusting for starting point, parental educational level, and homework time. Another study attributed increases in on-time graduation rates, college attendance, and improved test scores to block scheduling reforms (Langland, 1997). The author's observations and research in high schools in Baltimore suggests that block scheduling helps reduce discipline referrals and class tardiness, in part because students spend less time in the halls during the day.

Transitions

When students make the transition into high school as ninth graders, they must negotiate a new physical space, new relationships with adults and peers, and more challenging academic demands. Most high schools are large, bureaucratic organizations characterized by more formal rules and impersonal relationships than middle or elementary schools. Research on school transitions shows that many students struggle with the transition to high school (see Roderick, 1993, for review). Among all high school students, ninth graders tend to have the lowest grade point averages, greatest number of disciplinary problems, and highest failure rates. In her study of one school district, Roderick (1993) found that average grades declined by 18 percent following the move from middle to high school. She also shows that academic failure is more likely for many students during their first year of high school. Moreover, she

shows that academic failure during that year has a greater impact on students' decisions to persist in school because they are in the process of determining whether they "fit" in high school.

Successfully integrating into a traditionally organized high school is likely to be more difficult for poor and minority students. These students, generally, are more oriented toward work life than academics, tend to be placed in less engaging lower track classes, and are more likely to experience conflicts between their student role and other roles (parent, worker, translator, gang member) they play outside of school (Fine, 1985, 1987; Eckstrom, et al., 1987; Bryk & Thum, 1989; Oakes, 1985). With little personal attachment or access to extra help, many ninth graders fail courses, fall further and further behind, and ultimately become disengaged and drop out.

Roderick (1993) reviews a number of programmatic approaches designed to ease students' transition into high school. These include orientation and summer transition programs such as STEP, and targeted remediation programs that introduce students to the high school environment and provide extra help with academic coursework (see also Natriello, McDill, & Pallas, 1990). Other approaches involve creating advisories or special classes for ninth graders that emphasize personal contact between students and teachers and that focus on social support, life skills, and career awareness. Some districts are experimenting with more radical approaches that involve separating ninth graders from the rest of the school for all or part of the school day through the use of interdisciplinary teams, schools-within-a-school, or altogether separate schools (Beyers, 1997; McPartland, et al., 1997). Other strategies include establishing alternative settings and after-school programs that provide extra help for students or that enable students to continue earning credits toward graduation while working or while addressing legal or personal problems that make it difficult for them to attend regular day school.

II. Putting It Together

A small group of high schools across the country have been recognized for their successful experimentation with the reform strategies described in the previous section. In May 1996, as part of the New American High Schools Project, the U.S. Department of Education and the National Center for Research in Vocational Education identified ten exemplary high schools committed to comprehensive restructuring. These schools have been acknowledged primarily for their emphasis on college and career preparation achieved by organizing around a single career theme, incorporating career clusters or pathways, or implementing small, self-contained career-focused academies (Stern & Hallinan, 1997). The New Urban High Schools initiative, also sponsored by the U.S. Department of Education, has identified four additional exemplary sites of comprehensive, whole-school reform in large, urban districts which include many of the same elements (Rosenstock, 1998).[6] Many of these 14 high schools, as well as others in more nascent stages of reform, are linked to collaboratives designed to stimulate and support reform.[7]

Even among these exemplary high schools, only a handful are pulling together most or all of the reform components described above into a comprehensive plan for whole-school restructuring. Those that are putting the pieces together are in the early phases of implementation and very little research evidence is available to attest to their success. Some promising early results are emerging, however, as the following case illustrates.

Patterson High School

Located in a deindustrialized part of Baltimore, Maryland, Patterson High School had suffered the effects of increased unemployment and consequent poverty that have plagued many working class, urban neighborhoods over the past two decades. Once known as a "good school," by the early 1990s its plummeting achievement, dropout rates rising to over 50%, and increasing truancy and violence had earned this school a reputation for being disorderly and ineffective. Initial site visits prior to the implementation of the reform program confirmed this perception: "The school learning environment was in chaos. Small groups of unruly students were constantly roaming the halls and stairways, and repeated faculty efforts to bring order to

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[6] One school, William Turner Technical Arts High School in Miami, Florida, was identified as exemplary in both the New American High Schools and New Urban High Schools projects.

[7] These collaboratives include the Coalition of Essential Schools, the High Schools that Work Network, the California and Philadelphia Partnership Academies, the Philadelphia Schools Collaborative, and the CRESPAR Talent Development Project.

the building were unsuccessful. Teachers unable to maintain peace in the halls retreated to their classrooms where they tried to do their best with the few students in their own rooms. They kept the doors of their rooms closed, and many papered over their door windows to shut out the outside confusion" (McPartland, Legters, Jordan, & McDill, 1996).

Patterson is a large high school, with over 2,000 students. Like many urban schools, the student population has changed over the past thirty years. Once a school with a majority of Caucasian, middle class students, Patterson's current student body is about 60 percent African American, 30 percent white (mostly living in working class neighborhoods of Greek, Polish, and Italian heritage), and 10 percent Native American, Asian, and Latino. Like many inner cities attempting to stem middle-class flight, Baltimore has several high schools with special programs and entrance requirements which draw students from throughout the city. In contrast, Patterson is a non-selective school that receives all the students within a specified geographical zone who are not accepted into one of the selective "city-wide" high schools.

In 1993, the Maryland State Board of Education took unprecedented action to force improvement in the failing schools across the state by adopting regulations that set forth procedures for school "reconstitution." In January 1994, (and in each January of subsequent years) local school systems received a list of schools that the State Board deemed eligible for reconstitution because they were not meeting state standards and were declining or not making adequate progress toward the standards. Reconstitution-eligible schools were required to submit a comprehensive plan for substantial change in their administration, staff, organization, and/or instructional program. The plans were required to address the specific concerns of the state monitors and be approved by the State Board. Upon approval of their plans, schools were given several years to implement the proposed changes. Although the State Board has yet to spell out exactly what steps it will take at the end of the implementation period, the implication is that the state will take over schools that fail to improve during the allotted time.

Patterson was one of the first high schools in its district threatened with reconstitution if it did not produce significant changes to improve its dropout and attendance rates and student performance on state functional tests. In response, the school underwent an improvement planning process in 1994-95 and began implementing several reforms in the fall of 1995. These reforms included:

- Dividing the school into five smaller schools-within-a-school. With a total enrollment of 2,170 students and 110 full-time faculty (as of fall 1995), Patterson is one of the largest high schools in its district. In grades ten through twelve, students now attend one of four smaller career-focused academies. In the ninth grade, students attend a self-contained academy called the Ninth Grade Success Academy. Each academy is located in a separate part of the school with its own entrance and an administrative team made

up of an academy principal and an academy leader. Subject area departments have been officially disbanded under the new organization, although teachers still meet in subject-area groups to discuss curricular objectives.

- Reorganizing the schedule into four extended periods of 90 minutes in length (4x4 block) to provide more time for in-depth instruction and flexibility in scheduling and teaching methods.
- Organizing teachers in the Ninth Grade Success Academy into interdisciplinary teacher teams (made up of four teachers—a math, an English, a science, and a social studies teacher—called a MESS team) who share the same students and have a common 90-minute planning period built into the daily schedule.
- Instituting a Twilight School, an after-hours program for students who have serious attendance or discipline problems or who are entering the school after being suspended from another school or released from incarceration. Students may be admitted into (or back into) day school by doing well and earning credits in the Twilight program.
- Releasing students at noon every Wednesday to provide time for academies and teams to meet, plan, and participate in professional development activities.
- Installing computer labs, classroom phones, and other state-of-the-art equipment to upgrade the school's technology and communication systems.

Following a tension-filled planning process that resulted in some teachers leaving the school, the remaining teachers and administrators at Patterson came together to implement the reform process with a marked spirit of cooperation and teacher involvement. The academies were initiated and designed by teachers who emerged as leaders in the planning process. Teachers and administrators formed ad hoc committees to carry out various elements of the plan, many of which had to be implemented immediately or over a period of only a few months. These plans included making structural changes to the school building, coordinating the faculty and student academy selection processes, selecting and purchasing technological equipment, planning a kick-off faculty retreat, and—what turned out to be one of the most challenging tasks—scheduling teachers and students for classes according to the new organization.

A research team from the Johns Hopkins Center for Research on the Education of Students Placed At-Risk (CRESPAR) was asked to assist Patterson in its school improvement process. The CRESPAR team surveyed students and teachers several times throughout the planning and implementation process and also collected qualitative interview and observation data to gain a deeper and more nuanced understanding of changes occurring in the school. CRESPAR also obtained attendance, promotion, and achievement data from the school district.

Effects of the Reforms [8]

The most dramatic result of the reform effort at Patterson has been a marked improvement in overall school climate and in teachers' and students' perceptions of their school. Prior to implementation of the reforms, 80-90 percent of teachers reported that the school's learning environment was not conducive to achievement, that student misbehavior interfered with their teaching, and that the school lacked close relations among staff. After the first year of reform, these numbers dropped to 20-30%, indicating an almost complete turn-around in teachers' experiences at Patterson. Compared to a matched control school, students at Patterson were much more likely to report improvement in their school on a variety of climate indicators such as students roaming the halls, overall school safety, and fairness of school rules. During a visit to the school, a nationally known educator asked a random group of students in the hall what they thought of the "new" Patterson. Although some students complained that the school became more strict after the reorganization, their comments suggested that they appreciated the more disciplined environment and the sense that they were attending "a real school." One student then proudly pointed out that Patterson was able to reduce the number of security guards from three to one after implementation. She laughingly noted that students call the lone guard the "Maytag Man," referring to the appliance mechanic whose machines work so well that he is left with nothing to do.

Attendance and promotion data also improved at Patterson. Over a three-year period (spring 1994 to spring 1997) consisting of a planning year and two implementation years, Patterson raised its attendance rate by ten percentage points for the entire school and by fifteen percent points for its ninth grade students. Over the same period, the average attendance rate in Baltimore's other high schools declined three percentage points. In part because they were attending more regularly, more students at Patterson were promoted to the next grade than had been in the past. In the fall of the planning year (1994-95), there were two and a half times as many ninth graders as juniors and seniors combined in the school. By fall of 1998, the number of juniors and seniors combined equaled the number of ninth graders. Increased passing rates were not the result of social promotion or a watered-down curriculum. In 1997, Patterson had the highest number of graduates who met the course requirements for the University of Maryland system among Baltimore's nine non-selective comprehensive high schools.

In the area of achievement, focused efforts within the ninth grade transition program resulted in a 20% increase in the number of students passing the Maryland State functional math exam, and a 12% increase in the number of students passing the State's functional writing exam. This gave Patterson the highest pass rate in math among the city's nine neighborhood high schools, and the third highest pass rate in writing. Recall that the state's decision to identify Patterson as a reconstitution-eligible school was based partly on the

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[8] For a more in-depth analysis of Patterson data, see McPartland, Balfanz, Jordan, & Legters, 1998.

school's performance on these exams. Also, the State of Maryland uses a school performance index based on attendance, retention, and functional test scores to rate and compare schools. In 1994/95, when it became reconstitution eligible, Patterson had the second worst school performance index among the nine zoned comprehensive high schools in Baltimore. By 1996/97, after their second year of implementing the reforms, Patterson had the second highest index score among those high schools, and the highest among the eight largest schools.

Other Sites

By breaking the school down into smaller schools, moving to an extended period, offering a career focus, providing a special program for ninth graders and other efforts, the faculty and staff at Patterson were successful in creating a much improved school. In part because of Patterson's growing reputation as a "turnaround" school, Baltimore City Public Schools is investing in moving of all of its zoned, comprehensive schools to a school-wide academy approach.

A look around the country indicates that other schools and districts are implementing reform models that look strikingly similar to the whole-school high school approach being implemented in Baltimore. The Oakland School District, for example, is investing heavily in the same model of "wall-to-wall" career academies with ninth grade transition programs and flexible block scheduling, building on the success that single career academies have had in that district. Virtually the same model being implemented at Patterson can be found among the high schools identified as exemplary in the New American High School Project, including Encina High School in Sacramento, California, the Chicago Vocational Career Academy School, and William H. Turner Technical Arts High School in Miami, Florida. Bell Multicultural High School in Washington, D.C., serving low income students who come from 50 different countries, has organized into a ninth grade "prep cluster" and four career-focused clusters. In Rio Rancho, New Mexico, a large grant from the Intel Corporation has supported a "high end" version of the model. Struggling with the all too familiar problems of apathy and low achievement, Rio Rancho educators built a new school from the ground up that included separate buildings for the ninth grade academy and each career academy (Hornblower, 1997).

Although still in their beginning stages, these ambitious efforts show promise for providing a viable alternative for high schools that want to provide *all* students with access to a college preparatory curriculum, adequate support, and a community of caring adults who hold high expectations for their advancement. Transforming an entire high school along these lines is no easy task, however. The following section outlines a number of challenges that schools are likely to encounter as they implement this package of reforms.

III. Challenges to Whole-School High School Restructuring

Through our experience working with reforming high schools in Baltimore, the Johns Hopkins/CRESPAR team has identified a number of challenges to implementing the set of reforms that Patterson and other schools are implementing. These challenges fall into three main categories—learning opportunities, human and technical difficulties, and professional community.

Learning Opportunities

Committing to a Common Core Curriculum with High Standards for All Students

When reorganizing a comprehensive high school into multiple career-focused academies, it is important to ensure that all academies, in both perception and reality, provide all students with college preparatory course work. The forces of academic differentiation run so deep in high schools that tracking may be sustained in subtle ways. For example, one academy may be designed in such a way that it draws the college bound students while other academies become "dumping grounds" for less motivated students. Schools in the process of restructuring that are loathe to eliminate special programs (either for accelerated or at-risk students), may attempt to preserve those programs by shifting them "whole hog" into one academy or another during reorganization. Although this may be necessary during a transitional period, schools must be prepared to evaluate, reorganize, and even eliminate programs that compete with the goal of providing high level academic coursework to all students.

Another challenge schools will face in this area is the development of teaching resources to teach a common core of college preparatory academic classes in each academy. Many high school teachers are not only specialized by subject area (e.g., math and science) but have developed further specialization within their subject, with strengths in teaching algebra or chemistry for example. In failing urban high schools, many teachers have not had experience teaching high-level courses because so few students have populated college-preparatory tracks. Breaking up departments of teachers and distributing them to multiple academies throughout the school means that all teachers must be trained and feel confident teaching at various levels within their disciplines. Transitional structures, again, may be necessary, with upper grade students crossing academies for upper-level courses like physics and calculus until teachers for those courses can be placed in their academies. Schools also are using distance learning and early enrollment in community college courses to place students in advanced courses.

Committing to Integrated Curriculum and Work-Based Learning

The great strength of the career academy approach is the connection between academic and work-based learning. This connection is achieved by involving industry partners in designing the academy curriculum and by ensuring that students have exposure to the workplace through job shadowing, internship, and actual paid work experiences. Realizing and sustaining these elements requires a great deal of time, training, energy, and commitment on the part of school- and industry-based staff. These elements do not materialize overnight and will never be developed if schools and districts rely only on academy leaders or principals who have teaching or traditional administrative duties. Among the New Urban High Schools, Rosenstock (1998) finds that the barriers to developing work-based learning opportunities exist primarily on the school side, where schools lack the knowledge and resources to establish and sustain strong partnerships. In Baltimore and Philadelphia, school-to-work initiatives at the district level are now being put in place to facilitate the development of industry advisory boards and provide high school academy staff with the training and facilitation needed to "put the career" in their career academies.

Creating work-based learning opportunities also must mean more than finding jobs for students. Research has actually found a negative relationship between working more than 15-20 hours a week and performance in high school (see Stern, 1997, for review). Although while students who work fewer hours perform better than students who work long hours, research findings are mixed on whether working fewer hours per week has benefits for students' academic performance. Evidence suggests that school support and supervision mitigates the negative impact that work may have on student performance. This suggests that supportive linkages between students' classroom learning and work-based learning are necessary for students to reap the full benefits of work experience. Such linkages will require academic teachers to revisit curricula and develop and monitor their students' work-based learning experiences.

Committing to Revitalized Instruction

Many reformers have learned that structural reforms (school-within-a-school, interdisciplinary teams, extended periods) are necessary but not sufficient conditions for improvements in teaching and learning. Teaching in a 4x4 block schedule with 80-90 minute periods enables teachers to use varied instructional techniques, cooperative learning, alternative assessment, technology, project-based learning, and more student-directed, hands-on activities. However, unless teachers are trained in these techniques and in using the longer period effectively, instruction will remain unchanged no matter how many minutes are given for a class period.

Professional development for improved instruction must not be modeled after traditional forms of inservice training in which isolated teachers learn generalized skills primarily through fragmented, one-shot training workshops that are part of district-level, one-size-fits-all programs. Fortunately, education reform efforts are forcing the emergence of new models of professional development. These professional development models emphasize the need for teachers to take an active role in their own growth and the importance of learning opportunities that are coherent, long range, and closely linked to immediate classroom contexts, school goals, and real curricula (Little, 1993; Corcoran, 1995; National Foundation for the Improvement of Education, 1996; National Commission on Teaching, 1996). This kind of professional development must be supported by ongoing relationships with trainers and facilitators and by peer coaching networks within and among schools.

Human and Technical Difficulties of Reorganization

As with any comprehensive, school-wide change, planning is absolutely critical to successful implementation of the package of reforms described in the previous section. Schools cannot expect to completely reorganize overnight, or even over a summer. Indeed, CRESPAR recommends that schools take an entire year to plan once they have committed to implementing this set of reforms. This is because the effective implementation of a ninth grade academy and multiple career-focused academies requires the participation of the entire faculty and staff. Ownership of the small learning communities comes when faculty have had a hand in creating them and have had a chance to choose which one they want to join. There also must be time for faculty to "market" the academies to the students and their families, and for students to undergo a self-assessment process and ultimately choose their academy. Without these elements of participation and choice, the multiple-academy model can quickly deteriorate into contrived structural reform with all of the cynicism and resistance that typically accompanies such "top-down" change efforts.

A planning year is also necessary to work through the technical challenges that accompany the transformation of a comprehensive high school into multiple, self-contained small learning communities, especially in the areas of facilities changes, staffing, and scheduling. For small learning communities to be self-contained, each must be equipped with its own entrance, offices, faculty work rooms, and labs—not a trivial task for high schools long organized around subject-area departments and a scattering of special program areas. Staffing also presents a challenge in this labor intensive model. Not only must each academy be outfitted with its own administrative team and support staff, but each must have enough teachers to teach all of the core academic subjects and electives to its students. Schools moving to this model also experience scheduling challenges due, in part, to the lack of

computerized software available to generate the matrices necessary to develop a master schedule for multiple schools-within-a-school. Schedulers working within a 4x4 block schedule must be especially creative with year-long electives such as band or chorus that involve students from throughout the school.

Professional Community

Ideally, implementing the reforms that make up the new vision for high schooling set forth here fosters a more student-centered professional community among faculty and staff. Survey and observation evidence from Baltimore high schools suggests that proximity and a common focus on interdisciplinary teams within a ninth grade academy and within upper-grade career academies engender more frequent interactions about students and, to a lesser extent, about professional practice (Legters, 1996). However, the new structures can create divisions among faculty as well. In one school, ninth grade academy teachers expressed feelings of not only being separated from but also looked down upon by upper-grade academy teachers. By disbanding subject-area departments, teachers also are separated from their subject-area peers, requiring schools to institute different kinds of support for (and monitoring of) novice teachers.

Professional community also can be enhanced or strained depending on how clearly schools are able to develop the new leadership structures required to operate a multiple, wall-to-wall academy concept. In general, the success of multiple academies rests in part on the ability of the whole-school principal to delegate authority and allow each academy to run itself on a daily basis. In Baltimore high schools, academies have both an academy principal (typically an assistant principal) and an academy leader (often a former department head). In the ninth grade academy, interdisciplinary teams also have a team leader. Because they are not full-fledged administrators and because they are now general instructional leaders with responsibilities for teachers from a variety of subject areas rather than a subject area in which they have some expertise, academy leaders and team leaders experience high levels of uncertainty and ambiguity in their positions. Tensions arise when, for example, an academy principal overrules disciplinary decisions made by ninth grade team leaders, or when an academy leader with a math background conducts an observation of an English teacher. Teachers express concern that the whole-school principal is removed and out of touch with their academy and hence does not serve as an effective mediator of these tensions. Lacking proven models, schools adopting these reforms must negotiate new systems of leadership and evaluation that meet the challenges of the new structures.

The foregoing discussion does not by any means represent an exhaustive list of the challenges and barriers that high schools will face when attempting to implement the package of reforms presented here as a model for whole-school change. Other challenges urban schools are likely to face include ongoing competition with magnet and suburban schools for teaching and financial resources, effectively integrating special education students into the reforms, and convincing districts wedded to outmoded models of professional development to provide adequate time and resources for reform (see Legters, 1998). Additional challenges are certain to be identified as high schools continue their efforts and as more high schools adopt the reforms. Restructuring comprehensive high schools is a very difficult task that requires tremendous coordination of effort and resources, but it is a task that must be attempted. Our nation, and especially our inner cities, can ill afford the social and economic consequences of maintaining the status quo.

Conclusion

Whole-school reform is finally taking center stage in the education arena. More and more educators are understanding that piecemeal reform too often produces a confusing and inefficient proliferation of programs that generate resource battles, reinforce inequity, and ultimately help only a few students. Nowhere is this more apparent than in large, urban comprehensive high schools where a complex, loosely coupled and often highly politicized organizational structure has encouraged a band-aid approach to the growing social and academic challenges these schools face. Although headway has been made at the elementary and middle grade levels (Slavin & Fashola, 1998; Legters & McDill, 1994), most inner-city high schools remain in need of sustained comprehensive reform.

This report has shown that reform ideas for high schools exist, and that some schools are putting these ideas together in an approach to whole-school reform. Because these efforts are still in their infancy, research evidence showing positive effects remains more suggestive than conclusive. Perhaps most notable about these efforts, to date, is that restructuring high schools appear to be embracing so many of the same reform strategies, which suggests that the time may be ripe for a national high school restructuring movement. Such a movement would lend added coherence to the efforts of high schools around the country and better enable practitioners, researchers, and policymakers to learn from these efforts.

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